

FILE

U-2 General

IDEA 1091
Copy 1 of 7

1 March 1963

MEMORANDUM FOR : Chief, Materiel Division, Office of Special Activities
SUBJECT : IDEALIST DC Generator

1. As further to the continuing investigation of the DC generator problem, Kelly Johnson called me the morning of 28 February, stating that LAC's investigation had continued through the night in conjunction with Lear Siegler, and certain other facts about the questionable drive bearings were as follows:

a. The New Departure Corporation was one of three bearing suppliers to Jack and Heintz. The other corporations were Pfaffner and MRC. According to Kelly, the New Departure bearing is not rated either for load or temperature in this generator. The specification calls for 6,000 RPM and the ability to withstand 350° F. temperature. The New Departure bearing is rated at 480 RPM, and the rubber seal on it tests out only to 250° F. It was Kelly's view that the Jack and Heintz purchasing department had opted for this source on a cost basis, since the specification as written mentioned "Pfaffner bearings or equivalent."

b. Kelly said that LAC would be continuing their testing on generators equipped with the New Departure bearing, including instrumentation designed to tell them at exactly what point in temperature and time the generator fails when run at spec RPM to destruction. He added that he was seriously thinking of installing something analogous to the supercharger drive temperature indicator on the Connie in the IDEALIST aircraft. This would give a cockpit light to the pilot when the DC generator began to experience over-loading or over-tempering so that corrective action might be taken.

2. Kelly mentioned that unless and until the present generators were returned to spec, it would be impossible to operate the mission aircraft and

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the ALQ-49 and 51 simultaneously, since the added load would probably hasten the failure of the generator at altitude. He then added that with the cooling kit presently installed in Articles 352, 358, and 259 when the generator was requalified with the Pfaffner bearing, it should have little difficulty handling the added load imposed by the ECM systems. I should add that a full requalification of the generator, of course, implies abandonment of the important high temperature grease which also bears on the problem.

3. Kelly said that he still hoped to have four recalled and requalified generators ready for movement to the Far East on or about 2 March. I told him that we would furnish a courier for this purpose, and I subsequently alerted Mr. [REDACTED] to this requirement. 25X1A9a

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[REDACTED]
Deputy Assistant Director
(Special Activities)

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